

Subj

5
10
15
20
25
30
35

CLAIMS

1. An echo canceler for generating an echo replica and for subtracting the echo replica from a local input signal to create a residual signal for outgoing transmission, comprising:

a plurality of adaptive filters which have different computational accuracy for generating the echo replica;

an evaluator coupled to said adaptive filters for grouping coefficients into a plurality of segments, and evaluating a computational accuracy information according to the coefficients for said segments; and

10 a controller in said evaluator for assigning said local input signal into said adaptive filters, and adjusting the coefficients according to the computational accuracy information.

2. The echo canceler of claim 1, wherein the computational accuracy information is a power of the coefficients for each one of said segments.

3. The echo canceler of claim 1, wherein said controller assigns the local input signal to an adaptive filter for higher computational accuracy when the power for each one of said segments is above a predefined threshold.

20 4. The echo canceler of claim 1, wherein said controller assigns the local input signal to an adaptive filter for lower computational accuracy when the power for each one of said segments is below the predefined threshold.

25 5. The echo canceler of claim 1, further comprising a supervisor for monitoring a computational overflow for each segment which is assigned to said adaptive filter for lower computational accuracy according to the computational accuracy information, and ordering said controller to assign the local input signal to said adaptive filter for higher computational accuracy when the overflow occurs in the segment.

30 6. The echo canceler of claim 1, further comprising a supervisor for monitoring a computational overflow for each segment which is assigned to said adaptive filter for lower computational accuracy according to the computational accuracy information, and ordering said controller to assign the local input signal to an additional adaptive filter when the overflow occurs in the segment.

35 7. A method of canceling an echo component of a local input signal

to create a residual signal for outgoing transmission, comprising the steps of:

grouping coefficients into a plurality of segments;

evaluating a computational accuracy information according to the
5 coefficients for said segments;

assigning said local input signal to said adaptive filters according to
the computational accuracy information; and

adjusting the coefficients.

8. A method according to claim 7, wherein said step of evaluating
10 a computational accuracy information is a power of the coefficients for each
one of said segments.

9. A method according to claim 7, wherein said step of assigning a
controller assigns the local input signal to an adaptive filter for higher
computational accuracy when the power for each one of said segments is
15 above a predefined threshold.

10. A method according to claim 7, wherein said step of assigning
said controller assigns the local input signal to an adaptive filter for lower
computational accuracy when the power for each one of said segments is
below the predefined threshold.

20 11. A method according to claim 7, comprising the additional
steps of:

monitoring a computational overflow for each segment which is
assigned to said adaptive filter for lower computational accuracy according
to the computational accuracy information; and

25 ordering said controller to assign the local input signal to said
adaptive filter for higher computational accuracy when the overflow occurs
in the segment.

12. A method according to claim 7, comprising the additional
steps of:

30 monitoring a computational overflow for each segment which is
assigned to said adaptive filter for lower computational accuracy according
to the computational accuracy information; and

ordering said controller to assign the local input signal to an
additional adaptive filter when the overflow occurs in the segment.